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RESEARCH IN COLLEGIATE SCHOOLS OF BUSINESS¹

I. INTRODUCTION

The problem of research in collegiate schools of business may be approached from two points of view. Broadly, they may be put thus: *first*, what are the standards to which research in business must conform; and *second*, why, if at all, and under what circumstances and conditions should collegiate schools of business undertake research in an organized manner through a separately established department or bureau?

There is little occasion before this Association to enumerate the different steps in research, or to discuss at length the standards to which research in business must conform. In view of the so-called research activities of private establishments and commercial agencies, however, and the contentions of the second part of this paper, that collegiate schools of business should organize separate research departments, it will, I hope, not be considered as an act of supererogation to review briefly the minimum requirements which must govern in business research.

The majority of teachers of economics and business, perhaps, have come to their positions after having themselves undertaken

¹A paper read before the meeting of the Association of Collegiate Schools of Business at Chicago in May, 1920.

research studies culminating in doctorate theses. The requirements established for such products are fairly well standardized and imposed. Not all teachers of business subjects, however, have met the tests imposed by an extended period of rigorous educational training, and not infrequently these same individuals are teaching courses the subject-matter of which is largely descriptive. There is a strong demand for instruction in practical and vocational subjects, and not always a supply of teachers nor a body of knowledge with which to meet this demand in a satisfactory and scientific manner.

The content of a course in business has been fully discussed before this Association and there is little occasion for me to raise the issues involved, let alone attempt to discuss them. My only reason for mentioning them in this place is to secure a background against which to outline the two phases of business research to which I have alluded. Neither is it germane to my purpose to settle the question as to the functions of schools of business, but it is suggestive, under the topics to be discussed, to keep the problem constantly in mind.

Keeping before us, therefore, the teacher, the student, the subject-content of business courses, and the functions of schools of business, the discussion may proceed to the central themes of the paper.

II. STANDARDS TO WHICH BUSINESS RESEARCH MUST CONFORM

In order to make clear the purpose of the discussion under this heading, and to relate it to the viewpoint supported relative to research work in collegiate schools of business, it may be necessary to anticipate the writer's main contention regarding research.

The stand taken is that organized research in such schools is preferable to individual research, *per se*; that the instructional staff, the student body, the school, and business profit most under such conditions, and that the organization problems to this end are not insuperable. The obligation to train students in the elements of scientific methods and to acquaint them first hand with business problems, as well as the opportunity to render service to business is acknowledged. Business can be made a laboratory

in which school, faculty, and student resources are mobilized for mutual benefit.

Because the full meaning of scientific method and its application to economic phenomena are so little understood by students, and until lately, even if now, so little appreciated by business, I have taken the liberty of summarizing in some detail the standards to which all research must conform.

Research implies both a point of view and a method. The point of view involves an unconditional demand for the truth; the method requires intelligent observation, scientific measurement, impartial analysis, logical inference, and sincere application of the conclusions reached to the problems to which the facts and observations apply.

Scientific method has been defined as a state of mind, and this is probably a true characterization if the condition is added that the point of view which it represents is consistent in seeking the truth, and in being guided by facts, not at one time, in one place, or under one condition, and of ignoring them when it becomes advantageous or when they are difficult to determine, but in all places, at all times, and under all conditions. To the fact analyst, imbued with the spirit of scientific method, facts are facts. They are welcomed for the truth which they contain. The attitude toward them and the changes which they make imperative, or toward the beliefs or customs which they challenge, is positive, receptive, and open minded; not negative, doubtful, and hesitant. It is not a little truth, but the whole truth, which is wanted. The essence of science is not so much in its content, nor in its product, as it is in its method.

The standards to which business research must conform may be grouped under the following heads: (1) those which concern the qualities of units of measurements or observation; (2) those which control the method by which the units are applied in the collection or summation of data; (3) those which govern the methods by which classifications and combinations of data must be tabulated or recorded; (4) those which relate to the graphic presentation of data; and (5) those which concern interpretation and the assignment of cause-and-effect relationships.

1. *Standards relating to the qualities of units of measurements and observation.*—Units of measurements must be homogeneous. Characteristics which are significant for the purpose for which units are used must not be ignored. It is, of course, impossible to secure absolute homogeneity, but not impossible to require relative and essential homogeneity. After all, differences themselves are only relative. Those which are important for one point of view may be ignored for others. But measurements require both a unit and a standard. Standardization implies homogeneity, it suggests conformity and suitability to conditions determined in the light of particular application. Measurement not only involves an application of a unit of measurement but also an interpretation of the results obtained from the application. Things which are equal to each other in name are often not so in use or in meaning. The meaning of a measurement of a business fact is a function of the use to which the measurement is put.

2. *Standards relating to the method by which units are applied in the collection or summation of data.*—Business facts constitute the raw material for business research. Business relationships, policies, and principles are founded upon them. What are the standards which should govern their collection or summation?

a) Business facts must be collected and summated for a definite purpose. Research cannot proceed as it were in a vacuum. The meaning of a fact is a function of the use to which it is put, and the costs of collection are only justified in the realization of a purpose. Fruitless investigations, carried on at enormous costs and resulting in ill will on the part of those who are interested in the results, discouragement on the part of those who are undertaking them, and a tendency to scout the idea of research and the function of experts are largely if not solely traceable to a violation of this seemingly self-evident truth.

b) Business facts must be collected in standardized units, under uniform methods of application and with a sufficient sanction.

c) Research standards require that wherever possible the truth or error of business facts shall be verified. Against the imputation of gullibility, those in charge of research should always be capable of defending themselves. Verification requires more than setting

mechanical accuracy and removing apparent inconsistencies. It involves an analysis of the composition of groups and totals, and a scrutiny of the uniformity of measurement and the methods in which units are applied for different times, places, and conditions.

d) The field from which data are secured must be adequate and the facts inclusive or representative. The choice of the field and the selection of the facts depend upon the purpose for which research is undertaken. A problem requiring inclusive data must be approached differently from one which may be studied by means of samples. Standards of collection may, indeed, become standards of elimination, and the establishment of balance and consistency, rather than simple verification of accuracy, becomes the goal.

3. *Standards relating to the form in which classifications and combinations of data should be tabulated or recorded.*—Both classification and combination of data presuppose the realization of a purpose and proceed from a desire both to segregate and unite qualities having similar characteristics. Scientific method is little more than taking full account of similarities and differences, and tabulation hardly more than a means of recording a scheme of classification. Classification precedes; tabulation follows. The sequence of thought is from purpose to method.

The standards to which tabulation must conform are as follows:

a) A tabulation surface should faithfully record the classification which it is intended to depict. There is a *best* form of tabulation for a given purpose, as there is a *most logical* basis of classification. The purpose of tabulation and the standard to which it must conform cannot be divorced.

b) Every tabulation should be adjusted in form and complexity to the subject matter which is to be expressed, to the person for whom it is prepared or the end for which it is designed, and in such a manner as to secure emphasis.

c) Tabulation forms should contain only relevant data and carry on their face both their justification and their explanation. The reciprocal relation between relevancy of fact and the purpose to be accomplished by tabulation is the thought which is stressed.

d) The details in statistical tables should be mechanically accurate, their grouping and arrangement consistent, logical, and serviceable, and the order in which they appear emphatic.

4. *Standards relating to the graphic presentation of data.*—The excuse for the use of graphics in business research is largely if not wholly their universal appeal. Graphs speak a common but frequently an inarticulate and confused language. There is an attractiveness about them which is alluring but often deceptive. Their appeal is visual and instantaneous, not necessarily reasoned and reflective.

Distinguishing between rules for graphic presentation and the standards which give pertinency to the rules, the following standards may be formulated:

a) A fact and the form of its representation should agree. By this single standard, deception, whether resulting from a confusion of the apparent with the real or of the superficial with the fundamental, is fully provided against. The object of business, like other research, is the establishment or determination of truth. Standards for graphics provide for their use in influencing men but never in deceiving them.

b) Graphic forms should be selected according to their psychological appeal and their ease of comprehension, care always being taken not to violate the first standard.

c) Graphic forms should be chosen in accordance with (1) the form and complexity of the subject-matter illustrated, and (2) the type of consumer for whom they are intended or the purpose which they are designed to serve.

d) Graphic figures should be drawn as accurately as a visual representation will permit. Accuracy, of course, is never absolute. In graphics, the realization of relative accuracy of each part and of the totality is the standard set.

5. *Standards relating to the interpretation of business data.*—All forms of research involve an application of scientific method. But business research offers peculiar difficulties. In far too many cases, it is undertaken for profit and influenced by conditions of profit. It is seriously undertaken today and overthrown tomorrow; adopted in one line of endeavor and scouted in another. It is

undertaken by fits and starts, first welcomed and then dismissed. The results are too frequently given a narrow interpretation and are restricted to purely inside affairs without an appreciation of their intimate relations to outside facts. Business and industry are too often considered as made up of independent units or as involving separate problems, sections or individual aspects of which may be studied separately, and the facts concerning them independently interpreted. For instance, those engaged in research in time and motion studies have only lately, if they have now, come to appreciate that men, not automatons, are under the microscope.

Business is complex and the interpretations which are given to business facts must be thought of as relative. To look for a single meaning in, and to expect a single consequence to follow from, a group of business facts is to be grossly unscientific.

Given a related group of business facts, having been collected, classified, combined, and graphically expressed according to the conditions which have been formulated, to what standards must an interpretation of them conform? To fail to attach meaning and significance to them as bases for business policy and foresight is simply to accentuate the all too prevailing practice of leaving untranslated into business standards and principles the myriads of facts daily growing out of, or experienced in, business relations.

Certain fundamental standards of interpretation follow:

a) Truth is the end sought; error is not to be disguised, falsehood tolerated, nor preconceptions favored.

b) Comparisons can be made only between things, conditions, times, and places having common qualities.

c) In interpretation, facts must always be referred to conditions which can produce them.

d) Interpretation should extend to an explanation of the past, and to a forecast of the future. For business purposes, facts are more significant as bases for planning future policy than for explaining or justifying past action.

e) Distinction should be made between long- and short-time conditions and consequences; between transitory skirmishes and general tendencies.

f) The error should be avoided of confusing the results of a single cause with the results of a combination of causes; of identifying proximate and remote causes; and of expecting a single cause always to give rise to a single effect. A given cause is not a homogeneous thing except when viewed in the broadest way. The effects which seem to follow from it do not come as an undifferentiated whole, but as variations. Some come as coincidences; others, as sequences spread over long or short periods. Both cause and effect are in reality variates.

g) Distinction should be made between drawing a particular deduction and giving it general application.

h) Similarities and differences should be appraised in the light of particular application. Similarities which are seemingly complete, and differences which are fundamental for one purpose, may often be ignored for others.

i) The detail of interpretation should conform to the nature of the problem and to the capacity of those interested. Not infrequently an exaggerated accuracy, which the nature of the basic data does not justify, nor the occasion for summarizing warrant, is worked out in meticulous detail by means of percentages, averages, and other summary expressions. Similarly, far-reaching conclusions are sometimes drawn from inadequate data by elaborate and over-refined methods. Statistical analysis then appears as an inverted and unstable pyramid.

Likewise, involved and complex interpretations are sometimes prepared for those who are statistically ignorant of refined processes, or for those who are disinclined to follow an elaborate analysis. A statistical interpretation designed to influence executive action or to enlist administrative support is rarely, if ever, to be couched in the same language or to include the same detail, as one which is intended to serve the simple purpose of record. Consumers of statistics not only differ in their statistical interests but also in their statistical horizons.

Such are a few of the more important standards which should be realized in the various steps in business research. As has been said, were it not for the second part of this paper, it would have been unnecessary to speak of them in the foregoing detail. They

are submitted not as a final or complete statement of the fundamentals of research but only as a convenient summary background for the discussion of research in collegiate schools of business.

III. WHY, IF AT ALL, AND UNDER WHAT CIRCUMSTANCES AND CONDITIONS SHOULD COLLEGIATE SCHOOLS OF BUSINESS UNDERTAKE RESEARCH IN AN ORGANIZED MANNER THROUGH A SEPARATELY ESTABLISHED DEPARTMENT OR BUREAU?

a) *The present attitude of business toward research.*—The Great War furnished the occasion, if not the motive, for business and economic prescience. It served to direct attention to the use of facts for planning purposes. Largely due to the war, the case for business and economic planning has been won; the function of fact analysis in business demonstrated.

Industry has adopted a new point of view. Laboratories for experimentation are now found in the largest industrial establishments. Research in business under some auspices is being extended to purchasing and selling methods; to production time and motion study; to behavioristic psychology and employment management; to market breadth, depth, and elasticity; to phenomena of prices and costs and to the factors by which market fluctuations may be anticipated and uncertainties discounted.

Distinguishing features of this research are the scope in which it is being undertaken, and the interest in research of so-called fundamentals. In the face of increasing costs and prices, widening and uncertain markets, world-competition, changing business standards and restlessness in labor there is an incessant demand for knowledge about fundamentals, for a *real* solution of economic ills. The field of business research is ready; the sanction for research is daily being extended to private and public agencies, and it is inconceivable that collegiate schools of business should fail to take advantage of the opportunities offered by business, not only to be of service to themselves, their instructors, and students but to business as well.

Because of the frame of mind which the war developed and nurtured, and of the problems which it created, business constitutes in many respects an ideal laboratory. Simply as a result of daily

operations, great masses of comparable facts are currently developed. Some of these are crude, it is true; they are in the rough. But no business fact however carefully prepared is equally good for all purposes. Definition, measurement, and use are inter-related; they cannot be dissociated. So much the more reason for a rigorous fulfillment of the standards which research imposes. For collegiate schools of business, with for the most part a trained staff, an insufficient body of knowledge out of which to formulate the principles of business, and with a student body needing training in investigation and scientific methods as well as personal contact with business problems, to fail to utilize the opportunity now opened up to them for organized research in business seems to the writer to be both short-sighted and unscientific.

b) *Organized research by collegiate schools of business.*—That business has awakened to the needs for research is patent to all. The establishment of research departments or the use of commercial agencies is proof enough of this fact. To meet the business need, what have collegiate schools of business to offer? Unorganized for research purposes, the service consists primarily, if not solely, in the professional advice of those members of the instructional staff who are fortunate enough to command the respect of business houses, and whose opinions are sought. Such connections redound to the benefit of the business and the teachers involved, but do not necessarily mobilize the good will of the school nor the services of the student body per se.

When a school is organized for research, the following among other advantages accrue:

(1) Advantages to business

The school thus organized may be used by business

- (a) As an alternative to private agencies for research purposes.
- (b) As an alternative to the creation by itself of a research agency or department.
- (c) As an organized body to which appeals can be made for statements of business facts and principles more inclusive and comprehensive than could reasonably be expected from an individual instructor or department.

- (d) As a dispassionate and scientific source for information which is controversial or which might be colored by private or public agencies.
 - (e) As the source most likely to be formulating a business synthesis because of its intimate contact with professionally trained men in all phases of business relations.
 - (f) As a confidential agent to which trade or business secrets would be divulged when they would not be given to an individual or to a commercial agency. An organized bureau, like a school, is looked upon as being impersonal, the interests of which are non-pecuniary and thoroughly scientific. University resources give organized research a standing and a permanency which cannot be expected from widely dispersed or scattered individual effort.
- (2) Advantages to the faculty
- (a) On many problems involving more than a single interest, organized research makes possible a co-ordination of research activities. Moreover, it need not interfere with the studies of individual instructors. To be most successful as a co-operative enterprise, it should secure their sustained interest and services on all problems relating to their particular fields. Such co-operation need not exclude individual research effort and it may be the means of mobilizing it for truly productive ends. Organized research is simply an adaptation of scientific method to the interests which promote investigation. It is little more than division of labor, involving both specialization and co-operation.
 - (b) It stimulates production in so far as researches are co-ordinated, since organization of the field and the delivery of a product demand it.
 - (c) It is educative as to both problems and methods of research where conferences are had and responsibility and obligation are distributed.
 - (d) It tends to eliminate lost motion and duplication of effort to the degree that co-ordination is effected.

- (e) It results in the accumulation of a mass of information, the common property of all, the analysis of which both for business facts and principles may be far superior to the study of current books and treatises. This point is not refuted in the contention that such information will not be fully nor generally used. If it is not, the failure is due more to a lack of intellectual curiosity than to the way in which research is conducted.
 - (f) The good will of an organization in the eyes of business furnishes an opportunity to instructors themselves not only to secure facts but also to establish personal business connections.
 - (g) Connection with the research department, in case the teaching schedule is lightened, overcomes in part at least the necessity for periodical withdrawals from teaching in order to secure business contacts.
 - (h) It makes possible the development of a technique of method and a co-ordination of subject-matter to be taught and studied.
- (3) Advantages to students
- (a) An organized research department furnishes the sanction whereby students in field work are given experience in meeting business men; in securing facts; in observing the conditions under which business facts are recorded, and the types of facts upon which executive and other action rests; in witnessing business operations; in observing practical applications of business technique supporting generalizations developed in textbook and lectures. Students are given training in *doing* and are held to a definite accomplishment as a part of an organized scheme of study.
 - (b) Similarly, an organized department of research throws students of dissimilar interest together, each contributing his part of an organized whole. Both the unity and at the same time the peculiarities of business may be illustrated in a piece of research work of which the student is a part.

- (c) An organization for research creates group interests and arouses a stimulating rivalry. Moreover, it has the effect of pooling the interests of both students and instructor in a common enterprise.

There is, of course, a serious limitation, so far as research progress is concerned, in the use of all but the most competent students. Their services are in a large part unskilled and transient, and their interests may be indifferent. The difficulties of training students in the standards of research and of securing production are such that I would be the last to minimize or ignore them.

- (4) Advantages to schools of business, per se

Distinct gains to schools of business may reasonably be expected from organized research activities. Publicity of the proper sort is an asset, and organized research will be much more likely to command favorable attention than will that which does not result in a periodic, sustained, and comprehensive product. The good will and co-operation of business is desired, and there is nothing in this connection which will bring it as soon as proof that business schools not only know how to *teach* business subjects but can be of service in the solution of business problems. It is the writer's hope in connection with the Bureau of Business Research, Northwestern University, to make the school, thus organized, a service bureau to Chicago and the country in general. A school seeks business men for instruction; a bureau seeks business problems for study and solution.

c) *The fields of business research for collegiate schools of business.*

—The types of business problems which can be studied by an organized department will obviously depend upon the size, financial backing, and experience of the bureau developed. There must be close correlation between the services undertaken and the resources available. Research of a bona fide character requires time, money, co-operation, and skill. A paper organization lacking faculty support, a specialized staff, and funds stands less chance of realizing any of the advantages noted above for business, faculty, students, and school, and of conforming to the standards

required by research than do the inarticulated activities of the individual faculty members.

It may be helpful in discussing the types of business problems which can be successfully studied by research departments to distinguish between two somewhat different types of business problems.

There are two approaches to business research which, for convenience, may be described as the *inside approach with an outside perspective*, and the *outside approach with an inside significance*. The discovery of business principles, the measurement of business success, the anticipation of business difficulties, and the elimination or adjustment of business risks and friction are the ends sought in both approaches. The methods employed and the facts considered are different, more in their scope than in their essential nature.

Research addressed to *inside facts with an outside perspective* extends to costs, sales, markets, credits, production, and accounting methods and control, personnel, wages, and conditions of employment. Its end is narrowly pecuniary; the motive which prompts it, acquisitive; and its benefits generally restricted to the immediate industries involved. The increase of profits is its *raison d'être*.

Research addressed to *outside facts with an inside significance* proceeds differently. Individual experiences are lost in the totality of experiences as exhibited in *trends* of production, earnings, costs, prices, credit, wages, population growth, and concentration. It is undertaken not so much to secure an immediate increase of profits as it is to measure or anticipate demand, to forecast change, to bridge the gulf between the present and the future, and to measure and correlate the economic and social forces which determine business growth and decline. The long-time viewpoint and the study of fundamental causes and effects are the controlling factors. Obviously, the results of this type of research, if it accomplishes its end and its results are utilized, may be as narrowly pecuniary as the results of the other. The facts observed are much the same, but the approach is different. The methods followed, in so far as they are scientific, are identical. Scientific method knows

no variation; it does not find its justification in the salability of its product.

These two phases of business research are complementary but they are not equally well suited to study by business-school research departments, particularly in their initial stages, and so long as they depend in large part on student resources and have as one of their functions the teaching of students the rudiments of scientific method and acquainting them with business practices and principles.

The *inside* approach to business is personal. It utilizes business houses and organizations as laboratories, and brings the student in touch with the records, practices, and problems of business as it is conducted. The *outside* approach is more critical and synthetic in type. It groups individual business phenomena into an elaborate complex for the purpose of measuring trends, loses sight of individual peculiarities, and offers little or no occasion for laboratory experiences.

The problems best suited to the needs of research bureaus or departments in schools of business are those relating to accounting methods, trade customs and standards, production conditions, and employment problems, etc., where mass data can be secured by schedule or personal contact with individual business units, and where permanent connections for the receipt of such information and for its interpretation in terms of individual business needs can be effected. In order to secure the good-will of business and to sustain student and faculty co-operation and interest, the problems must be more of current and commercial significance than of historical or academic value.

d) *Organizations for research in collegiate schools of business.*—The form of organization desirable for a department or bureau of research will obviously depend upon the size of the school and its location, the types of problems which it can secure for study, the business connections which it can make, the training of its faculty, and the financial support which it can command.

It is the writer's belief that a member of the faculty should act as the director of the department or bureau, and that he should either have charge of the research work of all students, or be in

active co-operation with the person or persons having such responsibility. He should have adequate training for such a position, such training to include not only a thorough knowledge of, and experience in, the technique of investigation, but also the capacity to appreciate the business man's problems and to "sell" the idea of research. He should be able to organize research, and to secure the enthusiasm and co-operation of both the faculty and student body. His teaching schedule must be light and the course of study taught must relate directly to research and statistical methods.

The department should be properly manned. Student resources alone cannot be relied upon, but should be used wherever possible. A permanent and competent staff must constitute the background of the organization. Research consumes time, requires a maximum of enthusiasm, and a definite apportionment of power and responsibility. Co-ordination of activity is necessary at all stages and to secure this, organization is required. Obviously, the necessary organization is a function of the job, as the meaning of a business fact is a function of the use to which it is to be put. To lose sight of this relationship is to be grossly unscientific.

A research department or bureau should be considered as a component part of the school. It preferably should be financed from endowment, but where this is impossible should be treated as a necessary operating division of the school, and, if possible, be provided for by a continuing appropriation. It should be regarded as a service section to faculty, student body, and business communities and its life should be regarded as continuous. To treat it as temporary is seriously to restrict its activity and embarrass its operations.

Research undertaken for business should be charged for on a cost basis. A blanket assumption of costs is generally unsatisfactory, but in the absence of standardized cost items and the full requirements of a study it cannot generally be avoided. In all cases, it should be definitely stipulated that truth is the end sought, and that the research is undertaken solely with this in mind. The standing of the school and the requirements of research

demand this. Contracts for work should be undertaken and business connections made only on this basis.

e) *Conclusion.*—I have tried in this paper to outline briefly the standards to which research must conform and to discuss the problems involved in organized research when undertaken by collegiate schools of business. It is my belief that the time is ripe for development of research in business and that schools of commerce should take an active part in it. The difficulties which schools will have to meet in so doing are serious but not insuperable. They seem to me to rest primarily in securing the confidence and good-will of business, and of mobilizing the all too prevalently dissipated energies of the instructional staff and the interests of the student body.

Business education is only in its infancy and the possibilities of organized research by schools of commerce almost untouched. Business constitutes an operating laboratory to which schools of business should have free access. Sufficient safeguards can be set up so as to guarantee against the betrayal of business confidences, and an organization, with the required technique, should be developed which will translate into standards for business adoption the practices and principles which make possible the creation of a science of business.

As a basis for the discussion of research in business, the writer sent out to deans or directors of schools of commerce, a questionnaire designed to secure expressions of opinion upon questions which seemed vital to the consideration of this topic. In order that the Association may have the benefit of the points of view expressed in answer to the questionnaire, the following summary is included as a part of this paper.

It is impossible to give in brief compass all shades of opinion expressed and only those which appear to be commonly held are included. The following universities responded to the questionnaire in detail and it is the answers submitted by them which are summarized below. University of California, Dartmouth College, Harvard University, University of Minnesota, University of Missouri, University of Nebraska, Northwestern University, Ohio

State University, University of Pennsylvania, University of Pittsburgh, University of Wisconsin, Yale University.

SUMMARIZED RESULTS OF QUESTIONNAIRE

- A. The functions of a business research organization or department in relation to
- (1) Business needs are
 - (a) To investigate practical and fundamental problems pertaining to particular business concerns or fields of business
 - (b) To equip men for more effective business management
 - (c) To investigate general business conditions and problems
 - (d) To raise business standards
 - (2) Faculty needs are
 - (a) To gather material of use in vitalizing and improving instruction
 - (b) To broaden the information of members of the faculty by bringing them in contact with the real problems of the business world
 - (c) To centralize and unify the research of the faculty
 - (d) To facilitate and encourage first-hand investigation
 - (3) Student needs are
 - (a) To provide a laboratory for original work
 - (b) To train in methods of investigation, in classifying and appraising material and in expressing ideas logically and in clear, concise language
 - (c) To afford opportunity for first-hand contact with certain types of business establishments
- B. Faculty and student resources in schools of business should be organized for business research with
- (1) A director who is a member of the faculty or special expert from outside
 - (2) The faculty co-operating at the request or advice of the director in their own special fields of work
 - (3) More capable students doing field work in fields in which the bureau is engaged in investigations

C. Research, undertaken by an organized research department should

- (1) Co-ordinate the work of the department and the individual by pooling the resources in the various fields and weeding out aimless research work
- (2) Be subordinate to research done by faculty members
- (3) Be independent of research done by faculty members, unless there is overlapping, when individual research work might be used by the department
- (4) Extend beyond that done by faculty members
- (5) Furnish illustrative material for instructional work

D. Research conducted by an organized department has

- (1) An advantage over that conducted by individual members of a commerce faculty, because
 - (a) More comprehensive and diversified activities may be carried on
 - (b) Collective power can command greater financial resources and working facilities
 - (c) Greater continuity and unity are insured
 - (d) Faculty is spurred on to do research by definite requests
 - (e) Faculty's time is saved because they are relieved from routine work
 - (f) A responsible head is essential to research activities
 - (g) It gives prestige to an institution
- (2) A disadvantage over that conducted by individual members of a commerce faculty, because
 - (a) There is not the same amount of organizing ability devoted to the survey of the field and assembly of the facts
 - (b) Certain kinds of basic conclusions within narrow fields of inquiry require a concentration that can only come from individual effort

E. Business problems to be studied by research departments of schools of business should be

- (1) General problems common to many concerns or industries such as
 - (a) Types of business organizations
 - (b) Scientific management

- (c) Labor turn-over
 - (d) Shop discipline
 - (e) Cost-keeping systems
 - (f) Economy in delivery of goods, etc.
 - (2) Concrete and practical, because
 - (a) They will give students training for business after graduation
 - (3) Such that the results will lead to improvements in business policy and practice in the industry concerned
- F. The person in charge of research should be a member of the faculty who does instructional work
- (1) Eight answered "Yes, with time"
 - (a) One course of teaching
 - (b) Half and half
 - (c) Three to six hours of teaching
 - (d) Dependent on circumstances
 - (2) Four answered "No"
 - (a) Special expert with full time devoted to research. Should be trained in economics and have practical experience
 - (3) His qualifications should be
 - (a) Experience in investigation and directing work of others
 - (b) Statistical knowledge
 - (c) An appreciation of the needs of a business executive
 - (d) Ability to command the respect and enthusiasm of business men, faculty members, and research students
- G. The position of a non-faculty director of the bureau would be
- (1) On a plane with the heads of the departments
 - (2) A member of the University Extension Division
 - (3) Independent but subject to the collective judgment and decisions of faculty on matters of policy
- H. A bureau or department of business research should be financed by
- (1) Special endowment
 - (2) Contributions from the business concerns to which the research pertains

- (3) The state in state institutions
- (4) The general budget
- (5) A special budget
- (6) Private subscriptions

I. If research is undertaken at the request of business houses or organizations, should a definite contract covering cost, time, condition of report, etc., be required?

- (1) Four answered "No," because
 - (a) It is not possible to reduce costs to contractual bases at the beginning
 - (b) Bureau is public, and so there should be no charge
 - (c) Only a preliminary estimate of cost should be given, subject to change
 - (d) Cost could be given, but not time or condition of report
- (2) Four answered "Yes," because
 - (a) Service should pay for itself, so contract should be definite to protect research departments
 - (b) Necessary to prevent slackness in work

J. In order to insure that the research undertaken strictly conforms to scientific standards.

- (1) The direction must be kept in the hands of the bureau, which so conforms as part of the university
- (2) Agreement or contract should be definite and specific in its terms
- (3) Conversation with heads of business can give assurance of secrecy and sound results

K. Should the work of a research department, in connection with a collegiate school of business, depend solely on student and faculty service?

- (1) Eight answered "No"
- (2) Five answered "Yes"
- (3) Should these be charged for?
 - (a) Six answered "Yes"
 - (i) According to approximate cost
 - (ii) According to what a person would receive under competitive conditions and not as main incentive

- (b) Five answered "No"
 - (i) As it is a service a collegiate school, and particularly a state institution, should make
 - (c) Depends on type of work
- L. If outside services are secured, should the charge made for them be put on a commercial basis?
- (1) Five answered "Yes"
 - (2) Two answered "No"
 - (3) Depends on type of outside services secured

HORACE SECRIST

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